

Diving Into Science, Learning Set 2 Quiz

____/15 points

Matching

- | | |
|-----------------|--------------|
| a. line plot | e. trial |
| b. distribution | f. precision |
| c. repeatable | g. range |
| d. replicate | h. variation |

- _____ 1. a procedure that will give similar results if someone follows it
- _____ 2. a type of graph in which each data item is represented with an “x” above its value on a number line
- _____ 3. a wide spread of data
- _____ 4. spread
- _____ 5. one time through a procedure
- _____ 6. how close together the measured values are
- _____ 7. to repeat a procedure and get the same results
- _____ 8. the zone between the largest and smallest solution results

Short Answer

9. *Read the following scenario and answer it, applying what you’ve learned in class. Make sure you answer everything that’s being asked. (4 pts.)*

Scientists in City A spent two hours one evening catching fish in a stream using an experimental new bait and caught five fish, while scientists in City B spent two hours one morning catching fish in a lake using the same bait and caught two fish. They could not reach any conclusion about how many fish a person can catch using the bait. What are **two factors** that led to the different results? What are **two practical ways** the scientists could reduce the variation?

Name: _____

ID: A

10. *Use the graph below to answer the following question. (2 pts.)*

Consider the two line plots below. The line plots represent the weight of candy bars produced in a day by a manufacturing plant before and after they adopted new equipment. The manager of the plant wants the candy bars to have a standard weight. Which graph shows more reliable results? Explain how you know.

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11. **Explain** one new way you learned in Learning Set 2, how scientists work together to solve problems. (1 pt.)

Diving Into Science, Learning Set 2 Quiz
Answer Section

___/15 points

MATCHING

- | | |
|-----------|--------|
| 1. ANS: C | PTS: 1 |
| 2. ANS: A | PTS: 1 |
| 3. ANS: H | PTS: 1 |
| 4. ANS: B | PTS: 1 |
| 5. ANS: E | PTS: 1 |
| 6. ANS: F | PTS: 1 |
| 7. ANS: D | PTS: 1 |
| 8. ANS: G | PTS: 1 |

SHORT ANSWER

9. ANS:
Factors: lake vs. stream, different time of day

To reduce variation: fish in the same setting, same time of day

PTS: 1

10. ANS:
New equipment (A) is more reliable. The results were closer together. There is too much of a spread in the “old equipment” (B) graph.

PTS: 1

11. ANS:
Answers vary; main idea is that scientists design repeatable procedures.

Scientists examine variation/distribution of data.

PTS: 1